

To: Wall, Dan[wall.dan@epa.gov]
From: Way, Steven
Sent: Fri 9/12/2014 12:48:17 PM
Subject: R n B - Action Memo threat section

Dan,

Here's the Threat section of the AM. So if you have more and better.... information that you believe is appropriate to include please edit accordingly. Also, I will look at the information that you sent yesterday but if you are ok with it being in the Admin Record to support the decision to take an action that's what counts.

Release or Threatened Release into the Environment of a Hazardous Substance, Pollutant or Contaminant

Since 1995, when the first bulkhead was placed in the American Tunnel, adit discharge rates increased to approximately 300 gpm in recent years. The pH of discharge water typically ranges from five to six standard units (su). The adit discharge water contains high concentrations of several metals that include (and their approximate concentrations measured over many years): total aluminum (4,000 parts per billion (ppb)), cadmium (35 ppb), iron (90,000 ppb), lead (60 ppb), manganese (34,000 ppb), and zinc (16,000 ppb). The discharge from the adit represents a significant release of heavy metals, including zinc, to the Animas River. The Red and Bonita Mine discharge accounts for approximately 18 percent of the zinc load in the Animas River during low periods at a point (sample station A72) one mile below Silverton (USGS presentation, 2013).

The results of a Screening Level Ecological Risk Assessment (February 2013) strongly suggested that the fish community in the Animas River at and below Silverton is experiencing high stress under current conditions. For example, the surface water hazard quotient for zinc in the Animas River below the confluence with Cement Creek is approximately four, which is four times the expected no-effects level. In addition, the study identified Al, Cu, Pb and Zn as major risk drivers to insectivorous birds ingesting surface water, sediment, and aquatic invertebrates from the Animas River at and below Silverton. Also, metal concentrations highly toxic to benthic invertebrates were measured in the substrate of the Animas River at and below Silverton. Recent fish population studies conducted by the Colorado Division of Wildlife found no fish in the Animas River below Cement Creek for approximately two miles.

I am headed up to the Gold king again this AM, but then driving home today. I hope to get this AM in the concurrence process by Wed morning next week.

Thanks

Steve

Steven Way

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